

This Application Note is pertinent our entire Drive Family range

## Driving External Relays

Our drives use open collector transistor outputs that can be used to :

- drive external relays
- or
- pull down PLC inputs

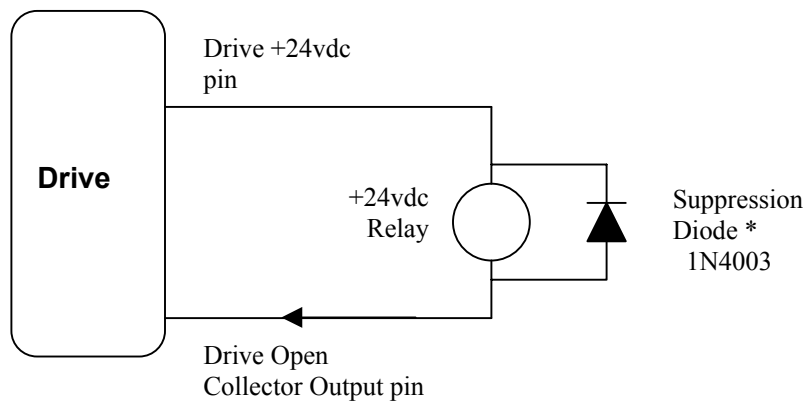
Our drives provide a modest 24vdc power supply to drive light control relays. Each drive series has different current amounts available for running external loads. Also the load to be driven must not exceed the Output Drive capability of that output driver.

| Drive Series          | Output Drive (max) | Available 24vdc supply current |
|-----------------------|--------------------|--------------------------------|
| Mentor II             | 100mA              | 200mA                          |
| Quantum III           | 100mA              | 100mA                          |
| Commander SE          | 50mA               | 100mA                          |
| Unidrive <sup>1</sup> | 100mA              | 200mA                          |
| Commander GP          | 100mA              | 200mA                          |
| VTC                   | 100mA              | 200mA                          |

<sup>1</sup> Set parameter #8.28=1

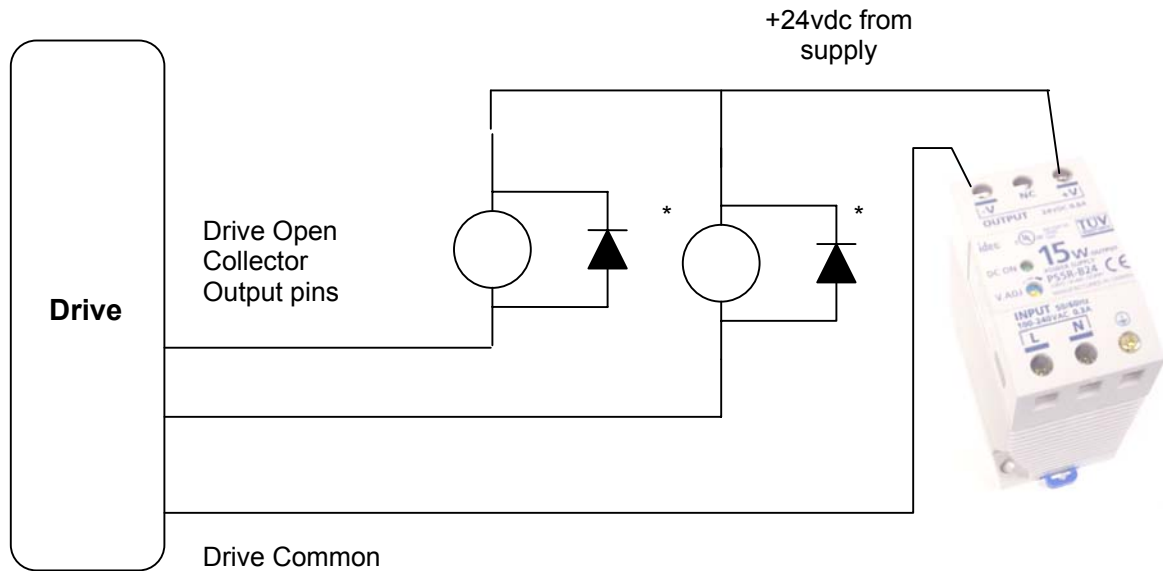
*The above supply currents are absolute max current available. Load demands exceeding this amount will cause a 24v power supply trip.*

Drive Outputs that are configured as open-collector outputs can drive a relay load with the circuit show below. For actual Relay and Suppression components consult or click here for [CTAN266](#)



\*The suppression diode is critical for any open collector transistorized output when driving an inductive device such as a relay or electromechanical counter. Without this “flyback diode”, the open collector output can be permanently damaged. **Note:** External diode required with Mentor II & Quantum III only.

If driving multiple relays where the current exceeds the available shown in the previous table, this can be accomplished by using an external 24vdc power supply to source the relays and simply connect the external power supply common to Drive common. The power supply should be regulated to not produce more than 24vdc. We offer a supply that is panel or Din rail mountable, carries uL/cUL and CE markings, supplies 600mA, is powered from 110vac-240vac and is 4"x2"x3". The supply can be connected as shown below for multiple output loads.



**For More Information on this Power Supply click below and go to 151 of catalog**

**[24v Power Supply](#)**  
**[P/N PS5R-B24](#)**

These components are stocked and sold through the North American Service Center

To order please contact sales @ **716-774-1193**



**Questions ?? Ask the Author:**

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